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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,523	12/10/2003	Kevin L. Beaman	108298718US	9060

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EXAMINER

TUROC, DAVID P

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/733,523

Applicant(s)

BEAMAN ET AL

Examiner

David Turocy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 16-26, and 35-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 27-34, 40 and 41 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-41 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/11/05</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-15, 27-34, and 40-41, drawn to controlling a temperature in a deposition process, classified in class 427, subclass 8.
 - II. Claims 16-26, and 35-39, drawn to deposition system, classified in class 118, subclass 666.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process such as controlling the temperature in a manner other than claimed in the process.

3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with David Dutcher on 11/28/2005 a provisional election was made without traverse to prosecute the invention of group I, claims 1-15, 27-34, and 40-41. Affirmation of this election must be made by applicant in replying to this Office action. Claims 16-26, and 35-39 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-15, 27-34, and 40-41 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for providing a first temperature sensor located outside of the deposition chamber between the heat source (50) and the deposition chamber wall (see figure 3), does not reasonably provide enablement for all temperature sensors on the outside of the deposition chamber. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims. One of ordinary skill in the art would. The specification does not provide additional direction or working examples to one of ordinary skill in the art to provide any temperature sensor "outside" of the deposition chamber, which is clearly within the scope of the claimed invention, to properly control the temperature during ramping. The specification does

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not provide guidance on the relationship between a temperature sensor, located at any point outside of the deposition chamber, and the deposition temperature and one of ordinary skill in the art at the time of the invention would reasonably have to conduct undue experimentation to determine such a relationship.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-2, 15 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by the admitted state of the art as taught by the applicant description, hereafter ASA.

ASA discloses a method of controlling a temperature in the deposition chamber, wherein the outer temperature is utilized as a first control temperature and the inside temperature is used as a second control temperature and selectively delivers heat to the process in response to the temperature (Paragraph 0005). The process of ASA is clearly utilized more than once and therefore the control temperature would alternate between the two-control temperatures (Paragraph 0005).

Claim 2: Each of the periods for control temperatures would inherently have a fixed time period.

Claim 15: ASA discloses delivering a precursor to the deposition chamber (0005).

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10. Claims 1-2, 13, 15, 27, and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 02/073660 by Porter et al., hereafter Porter.

Porter discloses a method of controlling a temperature in the deposition chamber, comprising a first temperature is from an outer temperature and a second temperature from the inner temperature, each of which is used as the control temperature and selectively delivers heat to the process in response to the temperature (Paragraph bridging pages 11-12). The examiner notes Porter discloses using a weighted average of the inner and outer temperature for the control temperature, however the claim as written only requires the control temperatures to be "from" the inner and outer temperatures and not equal to the inner and outer temperature. In addition, the claims do not quantify the differences between the first and second temperature and therefore the claim is open to a first temperature equal to a second temperature. Therefore it is the examiners position that the control temperature as a weighted average is "from" among other things the outer temperature or inner temperature as required by the claim. Therefore when ramping, the control temperature will be alternating from a first temperature "from" among other things the outer temperature and a second temperature "from" among other things the inner temperature.

Claim 2: Each of the periods for control temperatures would inherently have a fixed time period.

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Claim 15: Porter discloses delivering a precursor to the deposition chamber

(page 1).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent 6622104 discloses controlling a temperature using multiple thermocouples (Columns 5-7). US Patent 6207937 discloses controlling the temperature by relating power input to spike and profile thermocouple outputs (Column 9-Column 10). US Patent 6294394 discloses controlling the ramp rate to control the stress during ramping.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Turocy
AU 1762



TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER